

Work Order ID 157772 - 1

Tuesday, May 16, 2017 6:52:23 AM

SPLIT

157772

Page 1

Item ID: D3562-042

Accept

N9000040100

Setup

Start

NS1

Revision ID:

Item Name: Step Weldment

Stop

NS2

Start Date: 5/16/2017 Start Qty: 4.00

4

Cust Item ID:

Required Date: 6/2/2017 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3562

G

100

0.00

100

Large Fab

Large Fab

Memo

3.48

Large Fab

1-Cut D2622 extrusion as per Dwg D3562
2-Deburr and bevel ends for welding

4x DC 2017-05-18

110

QC5- Inspect part completeness to step on W/O

0.00

110

QC

Memo

0.00

Quality Control

4

DAS
36
9-88

MAY 24 2017

120

Chemical Conversion Coat per QSI005 4.1

0.00

120

HandFinish

Memo

1.49

Hand Finishing

(81) 2017/05/30
BIB

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work Order ID 157772

Tuesday, May 16, 2017 6:52:24 AM

157772

Page 2

Item ID: D3562-042

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Step Weldment

Start Date: 5/16/2017 Start Qty: 4.00

Required Date: 6/2/2017 Req'd Qty: 4.00

4

4

1 Split

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC7-Inspect Chemical Conversion Coat

0.00

130

QC

Memo

0.04

Quality Control

1

MAY 31 2017

DAS
24
9-89

140

Small Fab

0.00

140

Small Fab

Memo

2.95

Small Fab

1- Transfer drill Rivet holes as per dwg D3562.

2-Touch-up rivet holes with alodine as per dwg d3562

3-Rivet legs using Scotch-Weld as per dwg D3562.

*****Ensure to wipe off any excess magnobond *****

A/R Scotch-Weld DP460

Batch: 136223

EXP DATE: 11/17

1

4

MAY 31 2017

DAS
24
9-89

Tuesday, May 16, 2017 6:52:24 AM

Page 3

Customer:

Run	Start	*NR1*
	Stop	*NR2*

[illegible]

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
240 DS SIDS 1 & YAM									
240 DS SIDS 1 & YAM									
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					

Work Order ID 157772

Tuesday, May 16, 2017 6:52:24 AM

157772

Page 4

Item ID: D3562-042 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Step Weldment
Start Date: 5/16/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 6/2/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

180	QC5- Inspect part completeness to step on W/O	0.00							
180									DAS
QC	Memo	0.08							38
Quality Control									9-89
									MAY 31 2017

190	Chemical Conversion Coat per QSI005 4.1	0.00							
190									
HandFinish	Memo	0.69							
Hand Finishing									

200	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
200									
Powdercoat	Memo	1.26							
Powder Coating	START TIME: 8:45. OVEN TEMPERATURE: 325. FINISH TIME: 9:15.								

(X) 2020531
BEB.

1 17-05-31. 838

P.T.O.

DQA:

Date: 2017-07-10



QA Closed:

Date:

JUL 03 2017

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: 15772-1		DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. D3562-042		Rework ☒		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐		
NCR No. 17-6490		Scrap ☐		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐		
		Use-as-is ☐		Thermoforming ☐	Finishing ☒	Rec/Store/Packaging ☐	Other ☐		
		Suspected Unapproved ☐		Large Fab ☐	Composite ☐	Supplier ☐			
Date: 17-05-31	Step #: 200	QTY Effective: 1				MRB (QSI042) Approval			
Description Work Order Deviation				Disposition				PD 17.0602	
scotch-weld came out from hold and leave mark				- scuff the two arms - tape the step - Repowder coat the two arms at low temperature in 137/76 START: 1:20 O.U.T: 2:50 Finish: 1:50				Completed By 170531 Lead hand / Supervisor Approval Verification AS 38 789 JUN 02 2017 QC / QA Coordinator Approval PD 17.0602	
Root Cause				FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☒	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☒				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work Order ID 157772

Tuesday, May 16, 2017 6:52:24 AM

157772

Page 5

Item ID: D3562-042

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Step Weldment

Stop

NS2

Start Date: 5/16/2017 Start Qty: 4.00

4

Cust Item ID:

Required Date: 6/2/2017 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

210

Wing Walk as per dwg QSI005 4.4 Batch M137465 0.00

210

HandFinish

Memo

1.51

Hand Finishing

(X1)

2017/05/16
BET

220

QC3- Inspect Part Finish

0.00

220

QC

Memo

0.04

Quality Control

1X

DAS
36
9-89
17/06/01

230

Identify as per dwg & Stock Location: w/o 0.00

230

Packaging

Memo

0.04

Packaging

1X

DAS
36
9-89
17/06/01

160798

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Work Order ID 157772

Tuesday, May 16, 2017 6:52:24 AM

157772

Item ID: D3562-042

Accept

N900040100

Setup Start *NS

Revision ID:

Stop *NS

Item Name: Step Weldment

Start Date: 5/16/2017 Start Qty: 4.00

4

Cust Item ID:

Required Date: 6/2/2017 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

240

QC21 - Final Inspection - Work Order Release

0.00

240

QC

Memo

0.40

Quality Control

17/01/17 [Signature]

DAS
21
9-89

JUN 01 2017

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS							
Part No. _____		Rework ☐		Skid-tube ☐		Cross tube ☐		Water Jet ☐		Engineering ☐	
NCR No. _____		Scrap ☐		Machining ☐		Small Fab ☐		Prod. Eng. Coord. ☐		Quality ☐	
		Use-as-is ☐		Thermoforming ☐		Finishing ☐		Rec/Store/Packaging ☐		Other ☐	
		Suspected Unapproved ☐		Large Fab ☐		Composite ☐		Supplier ☐			
Date : _____		Step #: _____		QTY Effective : _____				MRB (QSI042) Approval			
Description Work Order Deviation				Disposition							
								Completed By			
								Lead hand / Supervisor Approval Verification			
								QC / QA Coordinator Approval			
Root Cause				FAULT CATEGORY							
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐		Power Loss/Surge ☐		Positioned Wrong ☐	
Design ☐		Operator ☐		Bending ☐		Set-up ☐		Folio/Program ☐		Outside Dimensions ☐	
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐		Grain ☐		Over/Under tolerance ☐	
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐		Weld ☐		Part Incorrect ☐	
Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐		Wrong Stock Pulled ☐		Part Lost/Missing ☐	
Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐		Out of Sequence ☐		Part Moved ☐	
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐		Off-set ☐		Drawing ☐	
Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐		Mislabeled ☐		Finish ☐	
LOA ☐		Product Improvement ☐		Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐		Fit/Function ☐		Misread ☐	
Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐		Misaligned/off center ☐		Turning Sequence ☐	
Past Expiry Date ☐		Manufacturing Process ☐									
Misidentified ☐		Past Due ☐		OTHER : _____							

Picklist Print

Tuesday, May 16, 2017 6:52:23 AM

Page 1

Work Order ID: 157772

157772

Parent Item: D3562-042

D3562-042

Parent Item Name: Step Weldment

Start Date: 5/16/2017

Required Date: 6/2/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A New Issue 06-11-09 JLM
 IPP rev B ECN 987 07.10.09 EC verified by: DD
 IPP Rev:C ECN1048 07-12-18 DD verified by: EC
 IPP Rev:D 08-07-28 add chemical conversion coat DD verf:EC IPP REV:E
 13.06.03 PER DWG REV.F DD VERF:JLM IPP REV:F 16.06.23
 AS PER DWG REV.G DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D2622-120C

Manufactured No

100

Each

121.5000

1

4

D2622-120C

Step Extrusion

**

DC- 2017-05-18

Location

Loc Qty

Loc Code

WA003

121.5

B157411 →

4x

152316

18.5

157441

103

D2734

Manufactured No

140

Each

39.0000

2

8

D2734

Step End Plate

**

MAY 31 2017

Location

Loc Qty

Loc Code

WA003

39

B158811 →

2

156811

19

159746

20

D3560-042

Manufactured No

140

Each

4.0000

1

4

D3560-042

Arm Weldment

**

MAY 31 2017

Location

Loc Qty

Loc Code

WA003

4

160582

4

1

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
STOS 1 E YAM				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

Tuesday, May 16, 2017 6:52:23 AM

Page 2

Work Order ID: 157772

Parent Item: D3562-042

Parent Item Name: Step Weldment

157772

D3562-042

Start Date: 5/16/2017

Required Date: 6/2/2017

Start Qty: 4.00

Required Qty: 4.00

D3560-044

Manufactured No

140

Each

5.0000

1

4

D3560-044

Arm Weldment

MAY 29 2017

DC

Location

Loc Qty

Loc Code

WA003

5

151524

1

160805

4

1

MS20600-AD4W4

Purchased

No

140

Each

1,522.000

32

128

MS20600-AD4W4

Rivet

MAY 29 2017

DC

Location

Loc Qty

Loc Code

CCK004

1011

M135704

11

M137412

1000

ST308

46

M137075

46

WA003

465

M135442

204

M136986

108

M137075

153

32

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

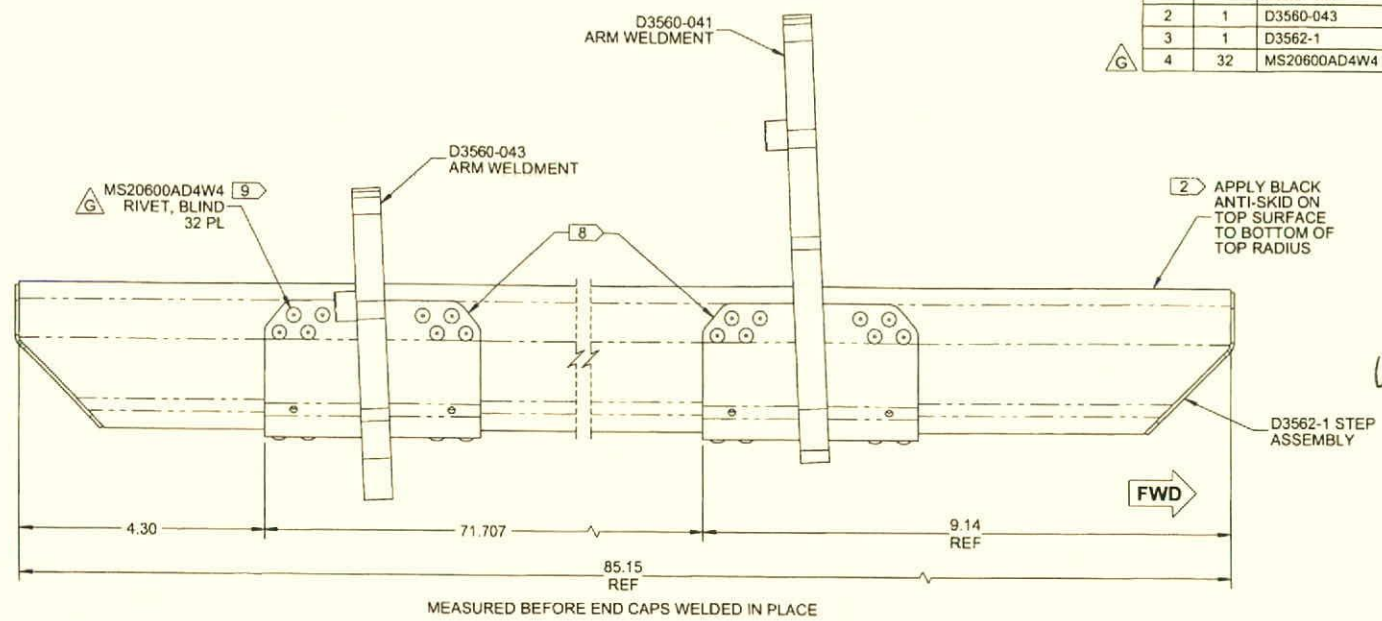
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

8 7 6 5 4 3 2 1

ITEM	QTY -041	P/N	DESCRIPTION
	X	D3562-041	LH STEP ASSEMBLY
1	1	D3560-041	ARM WELDMENT
2	1	D3560-043	ARM WELDMENT
3	1	D3562-1	STEP ASSEMBLY
4	32	MS20600AD4W4	RIVET, BLIND



W/D 57772

RELEASED
2016 JUN 22
ECN 14-661

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH:
 - i) POWDER COAT ASSEMBLY:
 - GLOSS WHITE (4.3.5.1) OR
 - GREY SANDETEX (4.3.5.6) OR
 - BLACK SANDETEX (4.3.5.7) OR
 - GREEN SANDETEX (4.3.5.8) PER DART QSI 005 4.3
 - ii) BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 8.80 lbs
- 8) INSTALL ARM WELDMENTS WITH A LAYER OF SCOTCH-WELD DP460 BETWEEN THE ARM WELDMENT AND STEP EXTRUSION. FILL ANY TOOLING HOLES WITH SCOTCH-WELD DP460. CLEAN OFF EXCESS BEFORE POWDER COATING.
- 9) TRANSFER DRILL #30 DEBURR & TOUCH UP HOLES WITH CHEMICAL CONVERSION COAT BEFORE RIVETING



D3562-041 LH STEP ASSEMBLY

REV.	DESCRIPTION	BY	DATE
G	MS20600AD4W4 WAS MS20600AD4W5 REF. PAR16-517	MB	16.04.21
F	REVISED NOTE 8 TO REMOVE MAGNOBOND, REPLACE WITH SCOTCH-WELD DP460. REF. PAR12-224. ADDED NOTE 9 AND SHEET 2	DW	13.05.15
E	ADD QTY(2) TO D2734 END PLATE ON D3562-042	PH	08.01.11
D	REMOVE D2808 SPACER NOTE: REDRAW IN SOLIDWORKS	DC	07.11.16
C	NOW MAGNOBOND, ADD D2808. REMOVE 4 RIVETS	CP	07.06.19
B	ARMS NOW RIVETED TO STEP	CP	07.01.15
A	NEW ISSUE	CP	06.09.26
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	MB		
CHECKED	ML	DRAWING NO.	REV. G
MFG APPR.	DD	D3562	SHEET 1 OF 3
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	STEP ASSEMBLY	NTS
DATE	16.04.21	COPYRIGHT © 2016 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CORRECT THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

APPROVED

8 7 6 5 4 3 2 1

DQA: _____ Date: _____

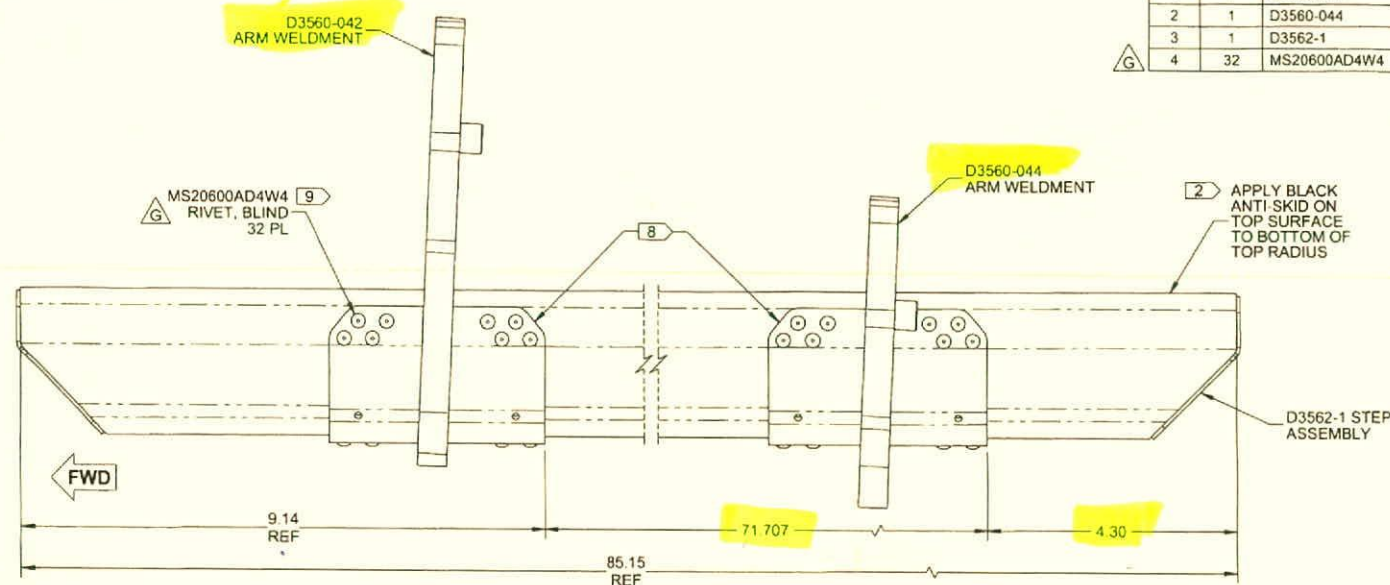
**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

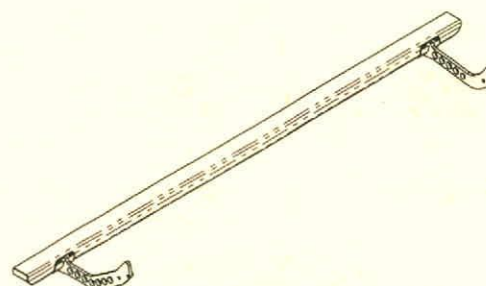
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Description Work Order Deviation				Disposition				Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

ITEM	QTY -042	P/N	DESCRIPTION
	X	D3562-042	RH STEP WELDMENT
1	1	D3560-042	ARM WELDMENT
2	1	D3560-044	ARM WELDMENT
3	1	D3562-1	STEP ASSEMBLY
4	32	MS20600AD4W4	RIVET, BLIND



NOTES:

- 1) MATERIAL: N/A
- 2) FINISH:
 - i) POWDER COAT ASSEMBLY: GLOSS WHITE (4.3.5.1) OR GREY SANDEXT (4.3.5.6) OR BLACK SANDEXT (4.3.5.7) OR GREEN SANDEXT (4.3.5.8) PER DART QSI 005 4.3
 - ii) BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 8.80 lbs
- 8) INSTALL ARM WELDMENTS WITH A LAYER OF SCOTCH-WELD DP460 BETWEEN THE ARM WELDMENT AND STEP EXTRUSION. FILL ANY TOOLING HOLES WITH SCOTCH-WELD DP460. CLEAN OFF EXCESS BEFORE POWDER COATING.
- 9) TRANSFER DRILL #30 DEBURR & TOUCH UP HOLES WITH CHEMICAL CONVERSION COAT BEFORE RIVETING



RELEASED

2016 JUN 22 49

DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	MB		
CHECKED	ML	DRAWING NO. D3562	REV. G
MFG. APPR.	DD		SHEET 2 OF 3
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	STEP ASSEMBLY	NTS
DATE	16.04.21	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR DISCLOSED OR TRANSMITTED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

DQA: _____ Date: _____

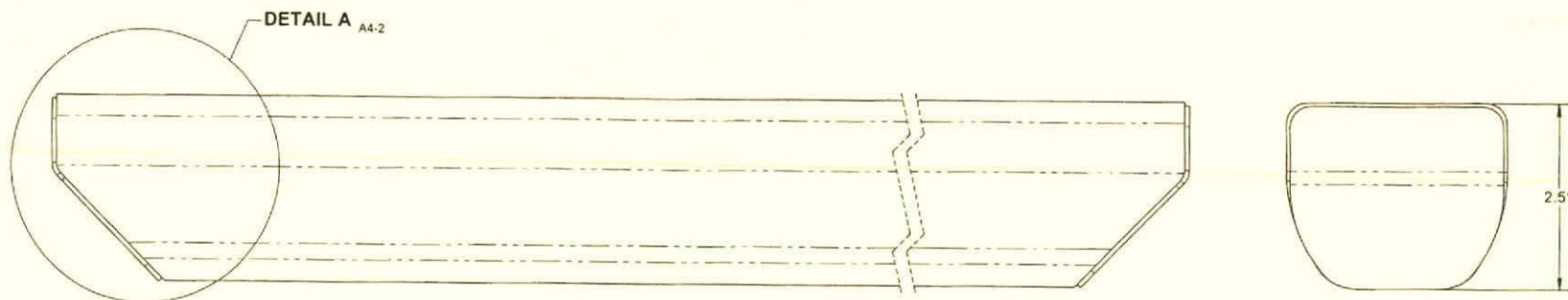
**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

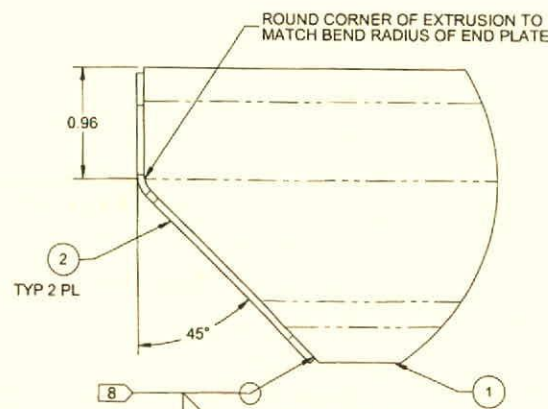
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

ITEM	QTY -1	P/N	DESCRIPTION
	X	D3562-1	STEP ASSEMBLY
1	A/R	D2622-XXX	STEP EXTRUSION
2	2	D2734	END PLATE



D3562-1 STEP ASSEMBLY



DETAIL A D6-2
TYP BOTH ENDS
SCALE 1.5X

RELEASED

2016 JUN 22 *q*

NOTES:

- 1) MATERIAL: MAKE FROM D2622 EXTRUSION
- 2) FINISH: CHEMICAL CONVERSION COAT STEP EXTRUSION
PER DART QSI 005 4.1 BEFORE ASSEMBLY
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 6.68 lbs
- 8) WELDING: ALL WELDS SHALL BE 100% VISUALLY INSPECTED
BY A QUALIFIED INSPECTOR PER DART QSI 004

APPROVED

DESIGN	CP	DART AEROSPACE LTD	
DRAWN	MB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ML	DRAWING NO	REV. G
MFG. APPR	DD	D3562	SHEET 3 OF 3
APPROVED	WM	TITLE	SCALE
DE APPR	DS	STEP ASSEMBLY	NTS
DATE	16.04.21	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMPILED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;"></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Root Cause		FAULT CATEGORY																							
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Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐		Misaligned/off center ☐	Turning Sequence ☐																
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